February 21, 2002

Mr. Paul J. Bertsch IV
B & F Plastics, Inc.
540 North Eighth Street
Richmond, Indiana 47374

Re: Exempt Construction and Operation Status,
177-15303-00103

Dear Mr. Bertsch:

The application from B & F Plastics, Inc., received on December 13, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3 it has been determined that the following plastics manufacturer, located at 540 North Eighth Street, Richmond, Indiana 47374, is classified as exempt from air pollution permit requirements:

(a) Four (4) natural gas-fired space heaters, identified as Heater 1 - Heater 4. Three of the space heaters have a maximum heat input capacity of 0.234 million Btu per hour each and the other space heater has a maximum heat input capacity of 0.195 million Btu per hour.

(b) Twelve (12) extruders. Extruders 1, 2, 5, 6, 8, 10, and 12 each have a maximum capacity of 400 pounds of plastic per hour. Extruders 3, 4, 7, and 9 each have a maximum capacity of 500 pounds of plastic per hour and Extruder 11 has a maximum capacity of 800 pounds of plastic per hour.

(c) Six (6) grinders. Grinders 1, 3, 4, 5, and 6 each have a maximum capacity of 1,000 pounds of plastic per hour. Grinder 2 has a maximum capacity of 500 pounds of plastic per hour.

(d) One (1) pelletizer that has a maximum capacity of 400 pounds per hour.

(e) Twelve (12) hoppers.

(f) Three (3) day bins.

(g) Three (3) resin storage silos.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

Pursuant to 326 IAC 6-3 (Process Operations), the following conditions shall apply:

(a) The allowable PM emission rate from Extruders 1, 2, 5, 6, 8, 10, and 12 shall not each exceed 1.4 pounds per hour when operating at a process weight rate of 400 pounds per hour.

(b) The allowable PM emission rate from Extruders 3, 4, 7, and 9 shall each not exceed 1.6 pounds per hour when operating at a process weight rate of 500 pounds per hour.

(c) The allowable PM emission rate from Extruder 11 shall not exceed 2.2 pounds per hour when operating at a process weight rate of 800 pounds per hour.

(d) The allowable PM emission rate from Grinders 1, 3, 4, 5, and 6 shall each not exceed 2.6 pounds per hour when operating at a process weight rate of 1,000 pounds per hour.

(e) The allowable PM emission rate from Grinders 2 shall not exceed 1.6 pounds per hour when operating at a process weight rate of 500 pounds per hour.

(f) The allowable PM emission rate from the pelletizer shall not exceed 1.4 pounds per hour when operating at a process weight rate of 400 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

In order to ensure that exemption status is maintained, weekly records must be kept of the amount of material processed.

This exemption is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/AR

cc: File - Wayne County
Wayne County Health Department
Air Compliance - Warren Greiling
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Branch - Karen Nowak

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3).

Company Name:	**B & F Plastics, Inc.**
Address:	**540 North Eighth Street**
City:	**Richmond, Indiana 47374**
Authorized individual:	**Paul J. Bertsch IV**
Phone #:	**(765) 962-6165**
Registration #:	**177-15303-00103**

I hereby certify that B & F Plastics is still in operation and is in compliance with the requirements of Registration 177-15303-00103.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	B & F Plastics, Inc.
Source Location:	540 North Eighth Street Richmond, Indiana 47374
County:	Wayne
SIC Code:	3061
Operation Permit No.:	177-15303-00103
Permit Reviewer:	ERG/AR

The Office of Air Quality (OAQ) has reviewed an application from B & F Plastics, Inc. relating to the construction and operation of plastics manufacturer.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Four (4) natural gas-fired space heaters, identified as Heater 1 - Heater 4. Three of the space heaters have a maximum heat input capacity of 0.234 million Btu per hour each and the other space heater has a maximum heat input capacity of 0.195 million Btu per hour.

(b) Eight (8) extruders. Extruders 1, 2, 5, 6, and 8 each have a maximum capacity of 400 pounds of plastic per hour. Extruders 3, 4, and 7 each have a maximum capacity of 500 pounds of plastic per hour.

(c) Four (4) grinders. Grinders 1, 3, and 4 each have a maximum capacity of 1,000 pounds of plastic per hour. Grinder 2 has a maximum capacity of 500 pounds of plastic per hour.

(d) One (1) pelletizer that has a maximum capacity of 400 pounds per hour.

(e) Twelve (12) hoppers.

(f) Three (3) day bins.

(g) Three (3) resin storage silos.

*Note: Extruders 1-8, Grinders 1-4, Heaters 1-4, and the pelletizer are already constructed and in operation at this source. The emissions from these units are at exemption levels.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(a) Four (4) extruders. Extruder 9 has a maximum capacity of 500 pounds of plastic per hour. Exruders 10 and 12 each have a maximum capacity of 400 pounds of plastic per hour and Extruder 11 has a maximum capacity of 800 pounds of plastic per hour.

(b) Two (2) grinders each with a maximum capacity of 1,000 pounds of plastic per hour.

Existing Approvals

There are no existing approvals pending.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 13, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations, pages 1 through 7.

Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	4.94
PM-10	4.94
SO_2	0.0024
VOC	2.89
CO	0.33
NO_x	0.39

HAP's	Potential To Emit (tons/year)
TOTAL	**0.93**

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants is less than the levels listed in 326 IAC 2-1.1-3(d)(1), therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

County Attainment Status

The source is located in Wayne County.

Pollutant	Status
PM-10	attainment
SO_2	maintenance
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Wayne County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Wayne County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

(a) This source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Wayne County and the potential to emit CO, VOC, NO_x, PM-10 and SO_2 is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the extruders will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3 (Process Operations), the following conditions shall apply:

(a) The allowable PM emission rate from Extruders 1, 2, 5, 6, 8, 10, and 12 shall not each exceed 1.4 pounds per hour when operating at a process weight rate of 400 pounds per hour.

(b) The allowable PM emission rate from Extruders 3, 4, 7, and 9 shall each not exceed 1.6 pounds per hour when operating at a process weight rate of 500 pounds per hour.

(c) The allowable PM emission rate from Extruder 11 shall not exceed 2.2 pounds per hour when operating at a process weight rate of 800 pounds per hour.

(d) The allowable PM emission rate from Grinders 1, 3, 4, 5, and 6 shall each not exceed 2.6 pounds per hour when operating at a process weight rate of 1,000 pounds per hour.

(e) The allowable PM emission rate from Grinders 2 shall not exceed 1.6 pounds per hour when operating at a process weight rate of 500 pounds per hour.

(f) The allowable PM emission rate from the pelletizer shall not exceed 1.4 pounds per hour when operating at a process weight rate of 400 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

The extruders, grinders, and resin storage silos do not have potential VOC emissions equal to or greater than twenty five (25) tons per year, therefore this source is not subject to the provisions of 326 IAC 8-1-6.

Conclusion

The construction and operation of this plastic manufacturer shall be subject to the conditions of the attached Exemption 177-15303-00103.

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

B & F Plastics, Inc.
540 North Eighth Street
Richmond, Indiana 47374

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____,I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____ .
(Company Name)

4. I hereby certify that (? Company Name), (complete source location), Indiana, (zip code), completed construction of the (? operation/facility) on _____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on (? date) and as permitted pursuant to **Construction Permit No. CP-177-15303, Plant ID No. 177-00103** issued on _____

5. Additional (?operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit. (Delete this statement if it does not apply.)

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

_____
Signature

_____
Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____ .

My Commission expires: _____

_____
Signature

_____
Name (typed or printed)

Appendix A: Emission Calculations
Extruders

Company Name: B & F Plastics, Inc.
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374
CP: 177-15303
Plt ID: 177-00103
Reviewer: ERG/AR
Date: January 18, 2002

Extruder Emission Factors (lb/lb rubber)

	Compound #1	Compound #2	Compound #3	Compound #4	Compound #5	Compound #6	Compound #7	Compound #8
VOC	1.48E-05	9.37E-06	3.25E-05	5.67E-06	5.15E-05	1.23E-05	2.92E-05	3.52E-06
PM/PM-10	2.12E-08	4.85E-08	1.08E-07	3.11E-08	**1.12E-07**	7.79E-09	6.83E-08	2.67E-08
HAPs	1.13E-05	7.14E-06	3.16E-05	1.03E-05	2.24E-05	3.52E-05	7.57E-09	2.35E-09

Extruder Emission Factors (lb/lb rubber)

	Compound #9	Compound #10	Compound #11	Compound #12	Compound #13	Compound #14	Compound #15	Compound #16
VOC	1.24E-05	6.97E-05	7.86E-06	3.69E-06	5.46E-05	5.50E-05	2.25E-06	1.96E-05
PM/PM-10	1.51E-08	4.32E-08	9.45E-09	2.20E-08	2.97E-08	1.57E-08	1.72E-08	3.82E-08
HAPs	1.95E-07	2.45E-09	0	1.72E-09	8.61E-06	2.27E-05	2.98E-05	2.52E-06

Extruder Emission Factors (lb/lb rubber)

	Compound #17	Compound #18	Compound #19	Compound #20	Compound #21	Compound #22	Compound #23
VOC	**1.06E-04**	1.56E-05	6.61E-06	1.80E-06	3.75E-05	8.30E-06	7.35E-06
PM/PM-10	1.08E-08	2.31E-08	8.32E-09	9.47E-08	9.05E-09	2.34E-08	4.10E-08
HAPs	**7.52E-05**	2.50E-05	1.98E-06	3.57E-06	6.04E-06	9.30E-06	1.59E-05

Emission Factors are from AP-42, Chapter 4.12 Manufacture of Rubber Products, Table 4.12-6 Extruder.
Methodology: Choose worst case emission factors for VOC, PM, and HAPs. The bolded numbers are the worst case.

	Maximum Capacity (lbs/hr)	Worst Case Emission Factors (lb/lb rubber)	Potential Emissions (tons/year)
VOC Emissions	2800	1.06E-04	1.300
PM/PM-10 Emissions	2800	1.12E-07	0.001
HAPs Emissions	2800	7.52E-05	0.922

Methodology: Emissions = (Maximum Capacity)*(Emission Factor)*(8760 hours/year)*(1 ton/2000 pounds)
Emission Factors are from AP-42, Chapter 4.12 Manufacture of Rubber Products, Table 4.12-6 Extruder.

Appendix A: Emission Calculations

Extruders (Resin)

Company Name: B & F Plastics, Inc.
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374
CP: 177-15303
Plt ID: 177-00103
Reviewer: ERG/AR
Date: January 18, 2002

	Maximum Capacity (lb/hr)	Emission Factor lb/lb resin	Emissions (tons/year)
PM/PM-10 Emissions	2800	1.00E-06	0.012
VOC Emissions	2800	0.000128	1.570

Methodology: Emissions = (Maximum Capacity)*(Emission Factor)*(8760 hours/year)*(1 ton/2000 pounds)
Emission factors are from "Development of Emission Factors for Ethylene-Vinyl Acetate and Ethylene-Methyl Acetate" Journal of Air and Waste Management. Volume 47, page 1116. 1997
Ethylene-Vinyl Acetate was used as the worst case.

Appendix A: Emission Calculations

Grinders

Company Name: B & F Plastics, Inc.
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374
CP: 177-15303
Plt ID: 177-00103
Reviewer: ERG/AR
Date: January 18, 2002

	Maximum Capacity (tons/hr)	Emission Factor (lbs/ton produced)	PM/PM-10 Emissions (tons/year)
Grinder 1	0.5	0.35	0.77
Grinder 2	0.25	0.35	0.38
Grinder 3	0.5	0.35	0.77
Grinder 4	0.5	0.35	0.77
Grinder 5	0.5	0.35	0.77
Grinder 6	0.5	0.35	0.77
Pelletizer	0.2	0.35	0.31
Total	2.95	0.35	4.52

Methodology: Emissions = (Maximum Capacity)*(Emission Factor)*(8760 hours/year)*(1 ton/2000 pounds)
Emission factors are from "Uncontrolled Emission Factor Listing For Criteria Air Pollutants" Volume II: Chapter 14, July 2001, Log Sawing (SCC 3-07-008-02).

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR<100
Heaters

Company Name: B & F Plastics, Inc.
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374
CP: 177-15303
Plt ID: 177-00103
Reviewer: ERG/AR
Date: January 18, 2002

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.9	7.9

	Pollutant					
	PM*	PM10*	SO2	NO_x	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	3.0E-02	3.0E-02	2.4E-03	3.9E-01	2.2E-02	3.3E-01

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology
All Emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR<100
Heaters

Company Name: B & F Plastics, Inc.
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374
CP: 177-15303
Plt ID: 177-00103
Reviewer: ERG/AR
Date: January 18, 2002

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMCF	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	8.251E-06	4.715E-06	2.947E-04	7.072E-03	1.336E-05

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor in lb/MMCF	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.964E-06	4.322E-06	5.500E-06	1.493E-06	8.251E-06

Total HAPs = 7.414E-03 tpy

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations

Woodworking - Pallet Construction

Company Name: B & F Plastics, Inc.
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374
CP: 177-15303
Plt ID: 177-00103
Reviewer: ERG/AR
Date: January 18, 2002

	Maximum Capacity (tons/hr)	Emission Factor (lbs/ton produced)	PM/PM-10 Emissions (tons/year)
Pallet	0.25	0.35	0.38

Methodology: Emissions = (Maximum Capacity)*(Emission Factor)*(8760 hours/year)*(1 ton/2000 pounds)
Emission factors are from "Uncontrolled Emission Factor Listing For Criteria Air Pollutants" Volume II: Chapter 14, July 2001, Log Sawing (SCC 3-07-008-02).

Appendix A: Emission Calculations
Summary Table

Company Name: B & F Plastics, Inc.
Address City IN Zip: 540 North Eighth Street, Richmond, Indiana 47374
CP: 177-15303
Plt ID: 177-00103
Reviewer: ERG/AR
Date: January 18, 2002

Potential to Emit in tons/year

Unit	PM	PM_{10}	SO_x	NO_x	VOC	CO	HAPs
Extruders (rubber)	0.001	0.001	-------	-------	1.30	-------	0.92
Extruders (resin)	0.012	0.012	-------	-------	1.57	-------	-------
Grinders & Pelletizer	4.52	4.52	-------	-------	-------	-------	-------
Heaters	0.03	0.03	0.0024	0.39	0.02	0.33	0.007
Woodworking	0.38	0.38	-------	-------	-------	-------	-------
Total	**4.94**	**4.94**	**0.002**	**0.39**	**2.89**	**0.33**	**0.93**